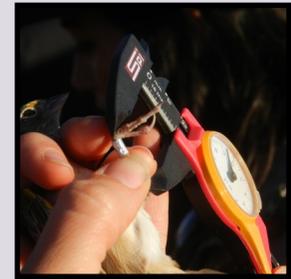


Jacob C. Locke — BRI Undergraduate Researcher

My name is Jacob Locke and I was raised in Center, Texas, deep in the Pineywoods of east Texas. I spent a lot of time hunting and fishing growing up in a small town surrounded by national forests and many lakes. This upbringing in the outdoors led me to pursue a Bachelor of Science degree in Wildlife and Fisheries Sciences at Texas A&M University with an emphasis in Wildlife Ecology. Texas A&M has provided me with many opportunities to gain experience in the wildlife field. I have been fortunate enough to travel to and study wildlife abroad in South Africa, Panama, and Costa Rica. I have been able to collect and learn how to prepare avian specimens for scientific collections through volunteering at the Biodiversity Research and Teaching Collections at Texas A&M. I have also volunteered working as an undergraduate researcher in the avian biosystematics lab at Texas A&M studying phylogenetic relationships. I hope to diversify my knowledge of avian ecology through studying desert grassland birds this summer and plan to pursue a Master's degree after graduation in May 2018.



Evaluating Grassland Bird Morphological Measurements to Distinguish Sexes

1 June — 31 August 2017

This summer I am assisting graduate student Kaitlyn Williams on her thesis study: Using Quail and Grassland Birds as Indicators of Chihuahuan Desert Grassland Ecosystem Health. The Trans-Pecos region of Texas has had very little, to no research, performed on certain species of grassland birds. Being able to accurately sex a sexually monomorphic bird is crucial in order to learn more about the differences between the sexes of a species. I will be conducting an independent research project looking at morphological differences between the sexes of 4 sexually monomorphic species. This study will use morphometrical measurements and plumage characteristics to determine if any morphological differences exist between the sexes of the Cassin's sparrow (*Peucaea cassinii*), lark sparrow (*Chondestes grammacus*), grasshopper sparrow (*Ammodramus savannarum*), and Eastern meadowlark (*Sturnella magna*) in the Trans-Pecos region of Texas. I will take morphometrical measurements using a ruler and calipers, and measure the color intensity of certain patches on each species using a Munsell Soil Chart. I will also take pictures of different parts of the birds to help distinguish plumage differences. The results of this study will be used by avian biologists in the future to be able to accurately sex these species through morphological differences.



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